



[40101/07401]

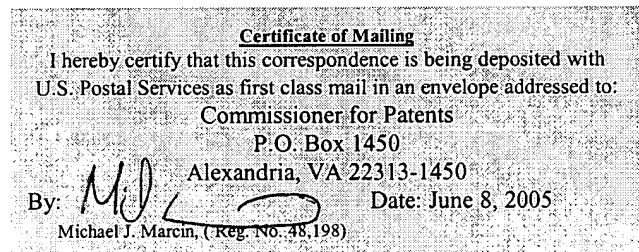
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventor(s) : James O'BRIEN  
Serial No. : 09/921,250  
Patent No. : 6,886,110  
Issue Date : April 26, 2005  
For : MULTIPLE DEVICE SCAN CHAIN  
EMULATION/DEBUGGING  
Group Art Unit : 2114  
Examiner : Nadeem Iqbal

**Certificate**  
**JUN 17 2005**  
**of Correction**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450



**REQUEST FOR A CERTIFICATE OF CORRECTION TRANSMITTAL**

In response to the patent issued April 26, 2005, please find a Request for a Certificate of Correction.

Respectfully submitted,

Dated:

6/8/05

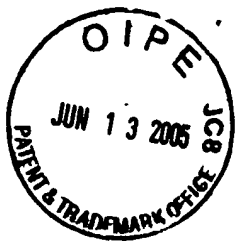
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JUN 21 2005

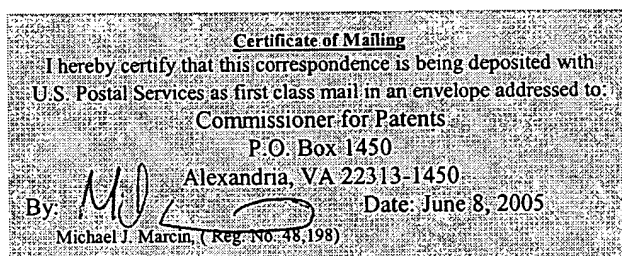


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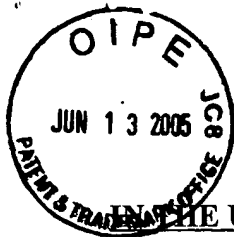
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Alexandria, VA 22313-1450

**REQUEST FOR A CERTIFICATE OF CORRECTION UNDER 37 CFR 1.322**

The Patentee's Assignee hereby requests the Commissioner to issue a Certificate of Correction pursuant to 35 U.S.C. 254 to correct the following mistakes in the above-identified patent which resulted through the USPTO error.

Please amend claim 7 to read as follows:

7. A method for emulating individual devices in a multiple device chain, said method comprising[[:]]:

obtaining the topology of the chain;

selecting one device within the chain;

placing at least one other device within the chain into bypass mode by generating a bypass instruction and sending the bypass instruction to the scan chain;

sending emulation instructions to the chain, wherein the emulation instructions bypass the at least one other device and are executed by the one device;

wherein the individual devices comprise JTAG devices and the chain includes a boundary scan chain; and

wherein the bypass instruction comprises;

an Instruction Register Header field to retain the number of instruction register bits upstream of the other device in the scan chain;

an Instruction Register Tail field to retain the number of instruction register bits downstream of the other device in the scan chain;

a Data Register Header field to retain the number of devices upstream of the other device in the scan chain;

a Data Register Tail field to retain the number of devices downstream of the other device in the scan chain; and

a Command field to retain a command for the one device.

Please amend claim 21 to read as follows:

21. An emulator comprising:

an emulator connector configured to couple to a scan chain;

a topology module configured to obtain the topology of the scan chain;

a selection module configured to select one device within the scan chain;

a bypass module configured to place at least one other device within the scan chain into bypass mode;

an emulation instruction module configured to send emulation instructions to the scan chain; and

a translation module configured to translate the emulation instructions into a format usable by the one device;

wherein the emulation instructions bypass the at least one other device and are executed by the one device.

Please amend claim 29 to read as follows:

29. An article of manufacture for emulating individual JTAG devices in a multiple device boundary scan chain, said article of manufacture comprising:

a computer usable medium having a computer readable program code embodied therein, said computer readable program code including instructions for:

obtaining a topology of the scan chain;

selecting one device within the scan chain;

placing at least one other device within the scan chain into bypass mode;

and

sending emulation instructions to the scan chain, wherein the emulation instructions bypass the at least one other device and are executed by the one device;

wherein said instructions for placing include a bypass instruction including:

an Instruction Register Header field to retain the number of instruction register bits upstream of the other device in the scan chain;

an Instruction Register Tail field to retain the number of instruction register bits downstream of the other device in the scan chain;

a Data Register Header field to retain the number of devices upstream of the other device in the scan chain;

a Data Register Tail field to retain the number of devices downstream of the other device in the scan chain; and

a Command field to retain a command for the one device.

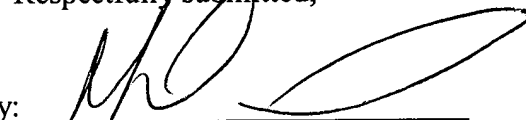
~~a Command field to retain a command for the one device.~~

Dated:

6/8/04

Respectfully submitted,

By:



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